

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Atty. Docket

HENRIK BOTTERWECK

PHDE 000155

Serial No.:

Filed: CONCURRENTLY

Title: METHOD OF DETERMINING AN EIGENSPACR FOR REPRESENTING
A PLURALITY OF TRAINING SPEAKERS

Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Prior to calculation of the filing fee and examination,
please amend the above-identified application as follows:

IN THE CLAIMS

Please amend the claims as follows:

3. (Amended) A method as claimed in Claim 1, characterized
in that the transformation for determining the eigenspace
basis vectors (\underline{E}_e) makes use of a reduction criterion based
on the variability of the vectors to be transformed.

4. (Amended) A method as claimed in Claim 1, characterized
in that for the eigenspace basis vectors (\underline{E}_e), associated
ordering attributes are determined.

6. (Amended) A method as claimed in Claim 4, characterized in that for reducing the dimension of the eigenspace a certain number of eigenspace basis vectors (\underline{E}_e) are rejected while taking the ordering attributes into account.

7. (Amended) A method as claimed in Claim 1, characterized in that for the high-dimensional model space first a reduction is made to a speaker subspace via a change of basis, in which speaker subspace all the supervectors of all the training speakers are represented and in this speaker subspace the transformation is performed for determining the eigenspace basis vectors (\underline{E}_e).

8. (Amended) A method as claimed in Claim 1, characterized in that the transformation is performed for determining the eigenspace basis vectors (\underline{E}_e) on the difference vectors of the supervectors of the individual training speakers to an average supervector.

9. (Amended) A speech recognition method in which a basic set of models is adapted to a current speaker on the basis of already observed speech data to be recognized of this speaker while an eigenspace is used, which eigenspace was determined based on training speech data of a plurality of training speakers in accordance with a method as claimed in Claim 8.

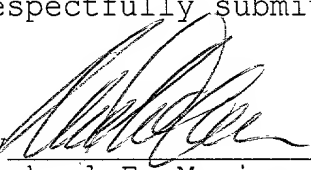
10. (Amended) A computer program with program code means for executing all the steps of a method as claimed in Claim 8 when the program is executed on a computer.

REMARKS

The foregoing Preliminary Amendment to claims 3, 4, 6-10 were made solely to avoid filing the claims in the multiple dependant form so as to avoid the additional filing fee.

The claims were not amended in order to address issues of patentability and Applicant respectfully reserves all rights she may have under the Doctrine of Equivalents. Applicant furthermore reserves her right to reintroduce subject matter deleted herein at a later time during the prosecution of this application or continuing applications.

Respectfully submitted,

By 
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APPENDIX

3. (Amended) A method as claimed in Claim 1 [or 2], characterized in that the transformation for determining the eigenspace basis vectors (\underline{E}_e) makes use of a reduction criterion based on the variability of the vectors to be transformed.

4. (Amended) A method as claimed in [one of the] Claim[s] 1 [to 3], characterized in that for the eigenspace basis vectors (\underline{E}_e), associated ordering attributes are determined.

6. (Amended) A method as claimed in Claim 4 [or 5], characterized in that for reducing the dimension of the eigenspace a certain number of eigenspace basis vectors (\underline{E}_e) are rejected while taking the ordering attributes into account.

7. (Amended) A method as claimed in [one of the] Claim[s] 1 [to 6], characterized in that for the high-dimensional model space first a reduction is made to a speaker subspace via a change of basis, in which speaker subspace all the supervectors of all the training speakers are represented and in this speaker subspace the transformation is performed for determining the eigenspace basis vectors (\underline{E}_e).

8. (Amended) A method as claimed in Claim[s] 1 [to 7], characterized in that the transformation is performed for determining the eigenspace basis vectors (E_e) on the difference vectors of the supervectors of the individual training speakers to an average supervector.

9. (Amended) A speech recognition method in which a basic set of models is adapted to a current speaker on the basis of already observed speech data to be recognized of this speaker while an eigenspace is used, which eigenspace was determined based on training speech data of a plurality of training speakers in accordance with a method as claimed in one of the preceding Claims.

10. A computer program with program code means for executing all the steps of a method as claimed in one of the preceding Claims when the program is executed on a computer.